TWO-SHOT, ROTARY THREE STATION INJECTION MOLD

ABSTRACT OF THE DISCLOSURE

A multi-shot injection mold utilizes a minimum of a first shot cavity and a second shot cavity for receiving injected molded plastic to produce a completed multi-component product. In conventional two shot molding, the injection of molten resin, cooling time of such resin, transportation of product to subsequent position and ejection of completed product requires a restrictive sequence. The invention allows flexibility in the sequence to gain efficiency within the molding cycle.

The invention uses a three position/station concept which allows each position to act independently of each other. The independent positions allow injection of first shot, injection of second shot and ejection of finished product to occur simultaneously. This effectively removes any additional cycle time required for ejection in the molding cycle.

Additionally, due to independent control of the three positions, the invention allows the ability to delay the ejection of finished product until after the injection of the subsequent first and second shot, thereby affording additional cooling time prior to ejection of the finished product. Generally, any of the three stations are able to operate while the mold is closed.

The invention further saves on overall cycle time by limiting the transport movement to 120° movement compared to the typical 180° movement.